3: Anonymous U-4 (no date) 1920 RH1 Caucasia RH1

for earlier years include also the production of the native undertakings, but in any case their quota is comparatively small. In 1913 Caucasia furnished 31 per cent. of the total Russian output. All Caucasian copper is disposed of in Russia. 328

Unexploited copper exists in the Naltchinsky Hills and over a small area on each side of the Ossetian Military Road; in both cases the deposits are estimated to be rich. 135

The production of *Glauber's salt* in Tiflis in 1910, amounting to 725 metric tons, represented nearly half of Russia's total output. 317

Iron is worked only spasmodically. It occurs chiefly in the Government of Elisavetopol, at Chinarlidz, where the veins are from 2 to 21 metres thick, and as haematite at Sirimadan in the Pambak Mountains and in the Boyan valley. Nearly 2,000 metric tons were produced in 1908, but in no subsequent year does anything approaching that amount appear to have been obtained. 327 [135]

Lead.—There are extensive deposits of argentiferous lead, but they have been little worked. The largest production is that of the Alagir Smelting Co. in Terek; but the metal also occurs in the Lialvar district, in the upper valley of the Kura, and near Kedabek, and shortly before the war was found near Akmetovskoi station in Kuban. 328 135

Manganese.—The principal deposit covers an area of nearly 100 square miles in the Kvirili valley in the Government of Kutais, the head-quarters of the industry being at Chiaturi. The ore contains on an average 40 per cent. manganese, 0·16 per cent. phosphorus, and 8 per cent. silicon, but in some workings the proportion of manganese is as high as 50 per cent. The ore is got out by means of hand picks, and is sorted by hand in a primitive way. It is soft and readily mined, and the firmness of the rock renders extensive timbering unnecessary. The miners do not fully exhaust the drifts, but work on them until they become dangerous or, on account of diminishing yield, unremunerative, a point which is soon reached owing 317 [135]

377 European Russia are in the Caucasus. Of these water resources a large part is already being exploited. In Azerbaijan: Mingechaur and Terter; in Armenia: Yerevan, Kanaker, Gyumush, Sevan; in Georgia: Zemo-Avchala, Khram, Adzharis-Tskhali, and Rioni are the most important hydro-electric plants. The hydro-electric plants along the Zanga River form the basis of Armenian industry. The industry of Tbilisi is based upon the power coming from Zemo-Avchala, whereas the Rion station supplies power for the Chiatura mines, for the ferro-manganese works of Zestafoni, and for industry in and around Kutaisi. The water resources of the North Caucasus are less exploited, although even there one finds great hydro-electric plants. The Baksan station (in the Kabardian ASSR) furnishes power to the health resorts around Pyatigorsk, the Ardon, Gizel'don, and Dzaudzhikau stations are the basis of North Ossetian industry. Cergebil', in Dagestan, is also one of the important stations (65,000 kw).

316 Iron mines: The Caucasus is poor in iron ore and the only important iron mine is at Dashkesan (Azerbaijan).

Manganese mines: This ore, very important in steel production, is mined at Chiatura, the second largest manganese mine in the world.

327 Centers of ferrous metallurgy: The two most important metallurgical centers are Rustavi, and Zestafoni (both in Georgia). The Rustavi steel mills, based on Tkvarcheli coal and Dashkesan iron, have a complete pig-iron, ingot, and rolled steel cycle. There are important

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b.10 Centers of Ferrous Metallurgy

327 metallurgical centers at Taganrog (with the largest boiler works in the USSR), and at Krasnyy Sulin.

316 Non-ferrous mineral resources: Of these, copper is the most important. It is mined mostly in Armenia (Alaverdi area, and Kafan) and in West Azerbaijan (Kedabek). Silver, lead, and zinc are mined only at Sadon (North Ossetian ASSR). It is noteworthy that the Caucasus (especially Dagestan), which has long been famous for its silver handicraft, has no other silver mine than this one. Molybdenum, one of the rare metals, is mined at Kadzharan (Azerbaijan SSR), and at Tyrny-Auz (Kabardian ASSR).

328 Centers of non-ferrous metallurgy: Located in Armenia and in the North Ossetian ASSR. Armenia has copper smelters at Alaverdi and Kafan, whereas the North Ossetian Republic is famous for its new metallurgical works at Dzaudzhikau which is of unionwide significance and is connected with the Sadon lead and zinc mines. In the same republic, Alagir has lead and zinc smelters and Minur has an ore-concentrating plant.

Centers of aluminum industry: The only plant, one of the important plants in the USSR, is at Yerevan. Production is based on cheap power from the stations on the Zanga River.

312 Machinery and metal-working plants: As the result of the Russian industrialization drive, nowadays almost every large city has machinery plants. Armavir, Maykop, Novorossiysk, Taganrog, and especially Rostov, specialize in